PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant	:	Mason et al.	)
			) Group Art Unit: 2665
Appln. No.	:	09/627,253	)
			) Examiner: Nguyen, Toan D.
Filed	:	July 28, 2000	)
For:	:	PRESENCE REGISTRATION AND ROUTING NODE	

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is an appeal pursuant to 35 U.S.C. § 134 from the Examiner's decision

rejecting claims 1-10, 22-34, 42-50, 61-66, 69-72, 75 and 76 as set forth in the Office

Action of September 2, 2005.

I. Real Party in Interest

The real party in interest is Tekelec, a California corporation, and the assignee of

the inventors' entire interest.

II.   Related Appeals and Interferences

There are no appeals or interferences, known to appellants or appellants' legal representative which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-78 are pending in the subject application. Claims 35-41, 73, and 74 are allowed. Claims 11-21, 51-60, 67, 68, 77, and 78 are withdrawn. Claims 1-10, 22-34, 42-50, 61-66, 69-72, 75, and 76 stand finally rejected by the Office Action of June 2, 2005, and are the subject of this Appeal.

IV.   Status of Amendments

Appellants received an Office Action dated June 2, 2005, finally rejecting claims 1-10, 22-34, 42-50, 61-66, 69-72, 75, and 76 and requesting that withdrawn claims 11-21, 51-60, 67, 68, 77, and 78 be canceled.

Appellants filed an Amendment after Final Rejection on December 2, 2005, canceling claims 11-21, 51-60, 67, 68, 77, and 78 and making a clarifying amendment to allowed claim 35.

Appellants received an Advisory Action dated December 28, 2005 indicating that the proposed amendments to the claims will not be entered for purposes of the appeal. The Amendment After Final Rejection dated December 2, 2005 requested that the word "communication" be replaced with "communications" in line on claim 35. The purpose for the amendment was for consistency with the remaining references to the "communications medium" in the remaining portions of claim 35. Because this amendment does not add any new matter or raise any new issues, Appellants respectfully request that the Board direct the Examiner to enter the proposed amendment to claim 35.

With regard to withdrawn claims 11-21, 51-60, 67, 68, 77, and 78, because the Advisory Action indicates that the amendments to the claims in the Amendment after Final Rejection dated December 2, 2005 were not entered, the status of these claims remains "withdrawn." Accordingly, the attached Claims Appendix includes withdrawn claims 11-21, 51-60, 67, 68, 77, and 78.

V.   Summary of Claimed Subject Matter

Independent claim 1 recites a method for updating presence information regarding a target end user in a presence database based on information derived from a telephony-related action.   Examples of telephony-related actions described in the present specification are registration of a wireless customer in a particular cell or service area (see page 26, lines 7-18 of the present specification), the placement of a wireline telephone call (see page 27, lines 6-19 of the present specification), or the dialing of a code via a telephone keypad (see page 28, lines 3-13 of the present specification). Each of these actions results in generation of an SS7 message, which is normally used for call setup, mobility management, or a database query, depending on the message type.   However, claim 1 recites a method by which such an SS7 message triggers generation of a presence registration message.

In claim 1, the method includes receiving a signaling system 7 (SS7) message (Figure 8, location update message **412**, Figure 9, ISUP IAM message **428**, or Figure 10, TCAP message **448**) in response to a telephony-related action performed by a target end user (Figure 8, mobile subscriber **402**, Figure 9, wireline subscriber **422**, or Figure 10, wireline subscriber **442**) to which other end users are subscribed in a presence database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**). One example of receipt of an SS7 message appears on page 25, line 23 through page 66, line 1 of the present specification where a location update message is received by presence registration and routing node **300** in Figure 8. A location update message may be generated when a mobile subscriber registers his or her handset with base station **404** (Figure 8).

Normally such messages are routed to the subscriber's home location register (HLR), as indicated by the location update message proceeding to HLR **408** illustrated in Figure 8.

However, rather than simply routing the location update message to the HLR, claim 1 recites determining, based on the SS7 message (Figure 8, location update message **412**, Figure 9, ISUP IAM message **428**, or Figure 10, TCAP message **448**) whether presence registration processing is required for the target end user (Figure 8, mobile subscriber **402**, Figure 9, wireline subscriber **422**, or Figure 10, wireline subscriber **442**). An example of determining whether presence registration processing is required for the target end user is described for ISUP messages on page 20, lines 7-16 of the present specification and for TCAP messages on page 24, line 16 through page 25, line 2 of the present specification. The location update message illustrated in Figure 8 is an example of a TCAP message that may require presence registration processing. An example of an ISUP message for which presence registration processing may be required is ISUP IAM message **428** illustrated in Figure 9. An example of a non-mobility-management TCAP message for which presence registration processing may be required is TCAP message **448** illustrated in Figure 10.

Claim 1 further recites, in response to determining that presence registration processing is required for a target end user (Figure 8, mobile subscriber **402**, Figure 9, wireline subscriber **422**, or Figure 10, wireline subscriber **442**), automatically generating a presence registration message (Figure 8, registration message **416**, Figure 9, registration message **434**, or Figure 10, registration message **450**) including presence information usable by a presence server (Figure 8, presence server **410**, Figure 9,

presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**) for automatically indicating to end users who are subscribed to the target end user (Figure 8, mobile subscriber **402**, Figure 9, wireline subscriber **422**, or Figure 10, wireline subscriber **442**) in a presence database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**) a presence status for the target end user (Figure 8, mobile subscriber **402**, Figure 9, wireline subscriber **422**, or Figure 10, wireline subscriber **442**).. The generation of a presence registration message in response to receipt of an ISUP IAM message is described on page 22, lines 4-6 of the present specification. The generation of a presence registration message in response to receipt of a TCAP message is described on page 24, line 24 through page 25, line 2 of the present specification.

An important concept in the presence protocol that is different from mobility management protocols used by the mobile call signaling network to track a subscriber's location is that using the presence protocol, subscribers can subscribe to another subscriber in a presence database to receive presence status updates when the presence status of the subscribed-to entity changes. For example, as described on page 4, lines 14-24 of the present specification, the presence protocol allows an entity A to subscribe to another entity B in a presence server P. When the status of B changes, P will notify E of the change in status of B. Thus, the presence protocol includes the concept of allowing one end user to subscribe to another end user for the purpose of receiving presence status for the target end user. Independent claim 1 recites a method for updating presence information for a target end user in response to receipt of an SS7 signaling message so that other end users who are subscribed to the end user will

receive status updates when the target end user performs a telephony-related action, such as activating a mobile handset, attempting a wireline call, or dialing a special code on a wireline phone. Deriving and automatically updating presence status from SS7 signaling messages increases the likelihood that the presence status to the target end user will be accurate and current.

Independent claim 5 recites a method for updating presence information regarding a target end user in a presence database based on information derived from a signaling message relating to a telephony-related action performed by the target end user. The method includes receiving an SS7 signaling message (Figure 8, location update message **412**) in response to a telephony-related action performed by a target end user (Figure 8, mobile subscriber **402**). Claim 5 further recites that the telephony-related action is the activation or change in location of a mobile telephone handset and that the SS7 message is a message for updating the status of the target end user (Figure 8, mobile subscriber **402**) in at least one of a home location register (HLR) (Figure 8, HLR **408**) and a visitor location register (VLR) (not shown in Figure 8). The receipt of the location update message by presence registration and routing node **300** is described in page 25, line 23 through page 26, line 1 of the present specification.

Claim 5 further recites intercepting the SS7 message (Figure 8, location update message **412**), extracting information from the SS7 message (Figure 8, location update message **412**) and using information extracted from the SS7 message (Figure 8, location update message **412**) to update presence information for the target end user (Figure 8, mobile subscriber **402**) in a presence database (Figure 8, presence server **410** or Figure 11, PDM **502**). Claim 5 further recites that the presence information

includes information usable by a presence server (Figure 8, presence server **410** or Figure 11, PDM **502**) for automatically indicating to end users who are subscribed to the target end user (Figure 8, mobile subscriber **402**) a presence status for the target end user (Figure 8, mobile subscriber **402**). The concept of a subscriber subscribing to another subscriber in a presence database is described on page 4, lines 14-23 of the present specification. The updating of presence information in response to a message transmitted to an HLR or a VLR is described, for example, on page 26, lines 4-18 of the present specification.

Thus, independent claim 5 recites a method where a presence information update for a target subscriber is generated in response to a telephony-related action that causes an SS7 message for updating the location of the subscriber in an HLR. However, rather than simply updating the subscriber location in an HLR, the SS7 message is intercepted, information is extracted from the message, and the information is used to update presence information for the target end user in a presence database. Claim 5 recites that the presence information includes information usable by a presence server for automatically indicating to end users who are subscribed to the target end user a presence status for the target end user. Thus, claim 5 recites the concept of subscription that is used in the presence protocol and not in mobility management protocols.

Independent claim 22 recites a presence registration and routing node (Figure 3, PRR node **300**) for updating presence information regarding an end user in a presence server database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**). The presence registration and

routing node includes a communication module (Figure 3, LIM **320**) for receiving an SS7 message relating to a target end user to which other end users are subscribed in a presence database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**) and for determining whether presence registration processing is required for the SS7 message. Two types of SS7 messages that are described in the specification as being usable for generating presence information are ISUP messages and TCAP messages. The receipt of an ISUP IAM message by LIM **320** is described on page 19 at lines 17-18 of the present specification. The receipt of a TCAP message by LIM **320** is described on page 23, lines 13-15 of the present specification. Claim 22 further recites a presence server message generator (Figure 3, PRM **340**) for, if the communication module (Figure 3, LIM **320**) determines that presence registration processing is required, receiving a copy of the SS7 message and for automatically generating a presence registration message including presence information usable by a presence server (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**) for automatically indicating to end users subscribed to the target end user a presence status for the target end user and wherein the presence server message generator (Figure 3, PRM **340**) is adapted to forward the presence registration message to the presence database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**). Generation of a presence registration message for a received ISUP message is described on page 21, line 25 through page 22, line 3 of the present specification. Generation of a presence

registration message in response to a received TCAP message is described, for example, on page 24, line 24 through page 25, line 2 of the present specification.

Thus, independent claim 22 recites a system that includes a communication module and a presence server message generator that cooperate to generate a presence registration message in response to a received SS7 message. Claim 22 also indicates that the presence registration message is usable by end users subscribed to a target end user a presence status for the target end user. Thus, claim 22 recites the subscription concept of the presence protocol.

Independent claim 29 recites a presence registration and routing node for updating presence information regarding an end user in a presence server database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**). The presence registration and routing node (Figure 3, PRR node **300**) includes a communication module (Figure 3, LIM **320**) for receiving an SS7 message from an SS7 network. The receipt of an SS7 ISUP message by LIM **320** is described on page 19, lines 17-18 of the present specification. The receipt of an SS7 TCAP message by LIM **320** is described on page 23, lines 13-15 of the present specification.

Claim 29 further recites a presence server message generator (Figure 3, PRM **340**) for generating, based on the SS7 message, a presence-server-compatible message (Figure 8, registration message **416**, Figure 9, registration message **434**, or Figure 10, registration message **450**) for updating presence information regarding a target end user in a presence server database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**). The

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presence information includes a presence status for the target end user. The presence server message generator (Figure 3, PRM **340**) is adapted to forward the presence-server-compatible message (Figure 8, registration message **416**, Figure 9, registration message **434**, or Figure 10, registration message **450**) to the presence server database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**). The forwarding of a presence-server-compatible message to a presence server database by PRM **320** in response to receiving an ISUP message is described on page 22, lines 21-22 of the present specification. The forwarding of a presence registration message generated in response to a received TCAP message to a presence database is described on page 25, lines 13-15 of the present specification.

Thus, independent claim 29 recites a presence registration and routing node that includes a communication module and a presence server message generator. The communication module receives SS7 messages. The presence server message generator generates a presence registration message in response to the received SS7 message and forwards the message to a presence server database.

Independent claim 42 recites a computer program product comprising computer executable instructions embodied in a computer readable medium for performing steps. The steps include receiving a signaling system 7 (SS7) message (Figure 8, location update message **412**, Figure 9, ISUP IAM message **428**, or Figure 10, TCAP message **448**) in response to a telephony-related action performed by a target end user (Figure 8, mobile subscriber **402**, Figure 9, wireline subscriber **422**, or Figure 10, wireline subscriber **442**). Page 19, lines 17-19 of the present specification describe receipt of an

ISUP IAM message by presence registration routing node **300**. Page 23, lines 13-15 describe receipt of a TCAP message by presence registration routing node **300**. Examples of telephony-related actions described in the present specification are registration of a wireless customer in a particular cell or service area (see page 26, lines 7-18 of the present specification), the placement of a wireline telephone call (see page 27, lines 6-19 of the present specification), or the dialing of a code via a telephone keypad (see page 28, lines 3-13 of the present specification).

Claim 42 further recites, in response to receiving the SS7 message (Figure 8, location update message **412**, Figure 9, ISUP IAM message **428**, or Figure 10, TCAP message **448**), formulating an Internet protocol message (Figure 8, registration message **416**, Figure 9, registration message **434**, or Figure 10, registration message **450**) for updating presence information regarding the target end user managed by a presence server (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**) for automatically indicating to end users who are subscribed to the target end user in a presence server database (Figure 8, presence server **410**, Figure 9, presence server **426**, Figure 10, presence server **446**, or Figure 11, PDM **502**) a presence status for the target end user. Generation of the presence registration messages in response to received location update messages is described on page 26, lines 7-12 of the present specification. For ISUP IAM messages, the generation of IP-based presence registration message is described on page 27, lines 1-3 of the present specification. The generation of an IP-based presence registration message in response to a TCAP message is described on page 28, lines 9-13 of the present specification.

Thus, independent claim 42 recites a computer program product that includes computer executable instructions for performing the steps of generating a presence registration message in response to a received SS7 message. The presence registration message includes information usable by a presence server for automatically indicating to other users subscribed to the target end user in a presence server database a presence status for the target end user. Thus, independent claim 42 recites the concept of a subscription used in the presence protocol.

VI. Grounds of Rejection to be Reviewed on Appeal

The grounds for rejection for review are:

(1) The rejection of claims 1, 4, 6, 10, 22, 23, 28-33, 42, 45-47, 61-65, 69, 71, and 75 under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,718,178 to Sladek (hereinafter, "Sladek") in view of U.S. Patent No. 6,611,516 to Pirkola et al. (hereinafter, "Pirkola");

(2) The rejection of claims 2, 3, 27, 43, and 44 under 35 U.S.C. § 103(a) as unpatentable over Sladek in view of Pirkola and further in view of U.S. Patent No. 6,430,176 to Christie, IV (hereinafter, "Christie"); and

(3) The rejection of claims 7-9, 24, 26, 34, 48-50, 66, 70, 72, and 76 under 35 U.S.C. § 103(a) as unpatentable over Sladek in view of Pirkola and further in view of U.S. Patent No. 6,564,261 to Gudjonsson et al. (hereinafter, "Gudjonsson").

VII.   Arguments

A.   Rejection of claims 1, 4, 6, 10, 22-23, 25, 28-33, 42, 45-47, 61-65, 69, 71 and 75

under 35 U.S.C. § 103(a) as unpatentable over Sladek in view of Pirkola

i.   Argument for independent claim 1

The rejection of claim 1 as unpatentable over Sladek in view of Pirkola should be reversed because neither document teaches or suggests a method for updating presence information in a presence database where the method includes receiving an SS7 message, determining whether presence processing is required, in response to determining that presence registration processing is required, automatically generating a presence registration message. Neither Sladek nor Pirkola has anything to do with the presence protocol, not to mention generating a presence registration message based on a SS7 message that is generated in response to a telephony-related action. As will be explained in detail below, both Sladek and Pirkola disclose mobility management messages commonly used in wireless telephone networks, and these messages are not presence registration messages. Claim 1 also recites that the presence registration message includes presence information usable by a presence server for automatically indicating to end users who are subscribed to the target end user in a presence database a presence status for the target end user. The mobility management protocols of Sladek and Pirkola do not include the concept of one user subscribing to another user. Rather, the mobility management protocols are used by the network to track a mobile subscriber's location.

Rather than teaching a method that relates to relates to generating a presence registration message based on receipt of a SS7 message, Sladek relates to a method

for automatically delivering short message service (SMS) messages to a calling party (See, e.g., column 15, line 14 of <u>Sladek</u>), a called party (See, e.g., column 15, line 7 of <u>Sladek</u>), or a third party (See, e.g., column 8, lines 39-52 of <u>Sladek</u>), in response to call processing event. SMS messages are text messages delivered over the telecommunications signaling network. Automatically delivering such messages has nothing to do with a presence registration message including presence information usable by a presence server for automatically indicating to end users who are subscribed to the target end user in the presence database a presence status for the target end user. SMS is a text messaging protocol used to communicate information to end users. There is no ability in this protocol for subscribers to subscribe to other subscribers for receiving updates in presence status information. Rather than teaching the updating of presence status information, <u>Sladek</u> merely teaches conventional IS-41 signaling messages used for delivering SMS messages. For example, <u>Sladek</u> states:

> In particular, CPE maybe programmed to send an IS-41 SMSREQ message to the HLR of SME **24** (possibly to one or more HLRs) and to receive a response smsreq message from the HLR, providing the sms_address of SME **24** (assuming that the destination SME is available. The sms_address may comprise the SS7 point code of the serving system that serves the SME 24, for instance. (See column 12, lines 25-32 of <u>Sladek</u>.)

The above-quoted passage from <u>Sladek</u> discusses how customer premises equipment (CPE) obtains the address of a destination short message entity (SME) from a home location register (HLR). The SMS request message is a message used by the CPE to obtain the point code (network node address) of the system where the intended short message recipient (SME) is currently located. The SMS request message is not a presence registration message. Rather, it is a query directed to a HLR. An HLR is not

a presence server or a presence database. Rather, it is a node that stores mobile subscription information used by the network and does not allow subscribers to subscribe to other subscribers. Accordingly, for these reasons, Sladek fails to teach or even remotely suggest a method that includes generating a presence registration message in response to an SS7 message where the presence registration message includes information usable by a presence server for automatically indicating to end users who are subscribed to the target end user in a presence database a presence status for the target end user.

Pirkola likewise lacks such teaching or suggestion. Pirkola, like Sladek, has nothing to do with generating a presence registration message, not to mention generating such a message in response to receiving an SS7 signaling message as claimed. In contrast, Pirkola is directed to a system for maintaining updated status and location information in a subscriber's home function each time a subscriber changes location. In Figure 2 of Pirkola, the home function 266 is a gateway mobile switching center (MSC) and the HLR that serve the subscriber. As stated above, a HLR is a node that stores mobile subscriber's subscription information and has nothing to do with presence information. The messages sent to an HLR include mobility management and query messages, none of which are presence registration messages. A gateway MSC is an end office switch in a mobile communications network, which does not store, generate, or process presence information. The function of a gateway MSC is to set up calls to mobile subscribers. Since neither the HLR or the gateway MSC that make up the home function of Pirkola store or generate presence registration information, the home function of Pirkola does not perform the

actions of generating a presence message in response to a SS7 message generated in response to a telephony-related action by an end user.

With regard to subscriber registration, Pirkola indicates that visited function 274 illustrated in Figure 2 provides the subscriber's current location to the home function for the purpose of delivering calls to the subscriber (See column 13, lines 1-21 of Pirkola). Visited function 274 includes the VLR and the MSC currently serving the subscriber. The process of delivering the subscriber's current location to the home function is a standard mobility management protocol function used in mobile communications networks and has nothing to do with generating a presence registration message. As recited in claim 1, a presence registration message includes information usable by a presence server for automatically indicating to subscribers who are subscribed to a target end user a presence status for the target end user. This message is generated in response to an SS7 message. The mobility management messages of Pirkola and Sladek are IS-41 messages. Unless a presence server is modified to participate in mobility management protocols, the presence server will discard such messages. Accordingly, because Pirkola and Sladek fail to teach the invention claimed in claim 1, it is respectfully submitted that the rejection of claim as unpatentable over Sladek in view of Pirkola should be reversed.

In paragraph (c) on page 3, the Official Action dated June 2, 2005 misinterprets Sladek. For example, paragraph (c) on page 3 of the Official Action states:

> in response to determining that presence registration processing is required for the target end user (figure 8, reference 48), automatically generating a presence registration message including presence information usable by a presence server (figure 8, reference 42) for automatically indicating to the end users in a presence database (figure 8,

reference 44) a presence status for the target end user (figure 8, reference 48) (col. 14 line 37 to col. 15 line 7)

The above-quoted passage indicates that Figure 8, reference numeral **48** of Sladek teaches the claim element of "in response to determining that presence registration processing is required for the target end user." Figure 8, reference numeral **48** of Sladek is the destination short message entity (SME) **48**. Sladek indicates that SME **48** receives a text message identifying a caller (See column 14, lines 60-64 of Sladek). Presence registration processing with regard to SME **48** is not discussed anywhere in Sladek.

The above-quoted paragraph from the Official Action further indicates that Figure 8, reference **42** of Sladek discloses the claim element of "automatically generating presence registration message including presence information usable by a presence server." Appellants respectfully disagree. Figure 8, reference numeral **42** of Sladek is the SMS logic. According to Sladek, the SMS logic determines the address of a destination subscriber and sends a text message to the subscriber. As stated above, the protocols used to locate the subscriber are standard IS-41 mobility management signaling protocols, rather than presence registration messages. Such IS-41 messages would be discarded by a presence server, because they are not compliant with the presence protocol.

The above-quoted passage from the Official Action further indicates that Figure 8, reference **44** of Sladek discloses the claim element of "automatically indicating to end users in a presence database." Appellants respectfully disagree. Figure 8, reference **44** of Sladek refers to a subscriber profiles database. According to Sladek, subscriber profiles define, "for a given subscriber or group of subscribers, what service

the subscriber or group subscribes to." (See column 13, lines 35-39 of <u>Sladek</u>.) The subscriber profiles of <u>Sladek</u> allow subscribers to subscribe to services, such as automatic SMS service. There is absolutely no description of allowing the subscribers to subscribe to <u>other subscribers</u> as claimed in claim 1.

The above-quoted passage from paragraph (c) of the Official Action further indicates that Figure 8, reference **48** and column 14, line 37- column 15, line 7 of <u>Sladek</u> disclose the claim element of "a presence status for the target end user." As stated above, Figure 8, reference **48** of <u>Sladek</u> is a destination short message entity that receives a short message. Neither the short message nor the mobility management messaging used to locate SME **48** is a presence registration message that updates the presence status of a target end user to which other users are subscribed. Column 14, line 37 – column 15, line 7 of <u>Sladek</u> discuss the delivery of a short message to SME **48**. As stated above, none of this messaging is a presence registration message as claimed in claim 1. Thus, because the Official Action dated June 2, 2005 misinterprets <u>Sladek</u>, for this additional reason it is respectfully submitted that the rejection of claim 1 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

ii.   <u>Argument for dependent claims 4, 6, 10, and 64</u>

The claims 4, 6, 10, and 64 depend from and further limit claim 1. Accordingly, the rejection of these claims as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed for the same reasons stated above with regard to independent claim 1.

iii.   Argument for dependent claim 65

Claim 65 depends and further limits claim 1. Therefore, for the same reasons stated above with regard to the rejection of claim 1, the rejection of claim 65 as unpatentable over Sladek in view of Pirkola should be reversed. Moreover, claim 65 recites that the steps in claim 1 are performed at an SS7 signal transfer point capable of transferring SS7 signaling messages between SS7 signaling links. Neither Sladek nor Pirkola mentions an SS7 signaling transfer point, not to mention an SS7 signal transfer point that generates a presence registration message in response to receipt of an SS7 message as claimed. Thus, for this additional reason, the rejection of claim 65 as unpatentable over Sladek in view of Pirkola should be reversed.

iv.   Argument for independent claim 5

The rejection of claim 5 should be reversed because Sladek and Pirkola fail to teach or suggest a method for updating presence information regarding a target end user in a presence database based on information derived from an SS7 message where the method includes receiving an SS7 message in response to a telephony-related action performed by a target end user, where the telephony-related action is the activation or change in location of a mobile telephone handset and the SS7 message is a message for updating the status of the target end user in HLR and/or VLR. Sladek and Pirkola likewise fail to teach or suggest intercepting the SS7 message, extracting information form the SS7 message, and using the information extracted from the SS7 message to update presence information for the target end user in a presence database. The presence information is defined in claim 5 as information usable by a

presence server automatically indicating two users who are subscribed to the end target user a presence status for the target end user. Thus, claim 5, like claim 1, recites updating presence information in response to an SS7 message. Claim 5 further recites that the SS7 message is a message for updating the status of a target end user in a HLR or VLR.

As stated above with regard to the rejection of claim 1, Sladek and Pirkola fail to discuss the generation of any presence information usable by subscribers who are subscribed to a target end user. Sladek is directed to an automatic SMS messaging system where a subscriber can subscribe to a service for receiving text messages, such as messages that indicate the identity of a caller. Pirkola is likewise directed to delivering text messages to subscribers. Both Sladek and Pirkola discuss the use of standard mobility management messages to update information regarding a subscriber in a HLR or VLR. However, neither document discloses intercepting such mobility management messages and generating or updating presence information based on such messages as claimed in claim 5. Accordingly, for these reasons, it is respectfully submitted that the rejection of claim 5 as unpatentable over Sladek in view of Pirkola should be reversed.

With regard to claim 5, page 5, second paragraph, of the Official Action dated June 2, 2005 states:

> One skilled in the art would have recognized change in location of a mobile telephone handset to use the teachings of Pirkola et al. in the system of Sladek et al. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention, to use the change in location of a mobile telephone handset as taught by Pirkola et al. in Sladek et al. system with a motivation being to update the subscriber's record in the HLR (column 3, lines 4-5). (Emphasis added.)

From the above-quoted passage, the Official Action incorrectly equates updating the HLR of Pirkola with updating presence information for a subscriber in a presence server. As stated above, an HLR is not a presence server because (1) it does not allow subscribers to subscribe to other subscribers, (2) it uses mobility management protocols rather than presence protocols, (3) it does not receive messages including information derived from SS7 messages regarding a user's presence status, and (4) it communicates with the network rather than with subscribers. Accordingly, for this additional reason, it is respectfully submitted that the rejection of claim 5 as unpatentable over Sladek in view of Pirkola should be reversed.

v.   Argument for independent claim 22

The rejection of independent claim 22 as unpatentable over Sladek in view of Pirkola should be reversed because Sladek and Pirkola fail to teach or suggest a presence registration and routing node that includes a communication module and a presence server message generator for receiving an SS7 message, generating a copy of the message, and for automatically generating a presence registration message including presence information usable by a presence server for automatically indicating to end users subscribed to a target end user in a presence server a presence status for the target end user, or forwarding such a message to a presence database. As stated above with regard to the rejection of claim 1, Sladek and Pirkola are both directed to delivering SMS messages to subscribers. Neither mentions generating a presence registration message. Both Sladek and Pirkola discuss querying and HLR to determine a destination subscriber's current location and delivering SMS messages to that

location. The protocol for obtaining a subscriber's location information is standard IS-41

messaging. There is no mention in either document of generating a presence

registration message based on mobility management messaging. Moreover, the only

subscription referred to in these documents is in Sladek where a subscriber can

subscribe to a service, such as automatic SMS messaging service. There is no mention

of generating any information usable by subscribers who subscribed to other users as

claimed in claim 22.

In addition, claim 22 recites that the presence server message generator

forwards the presence registration message to a presence database. On page 6, the

Official Action dated June 2, 2005 indicates that column 14, line 37 to column 15, line 7

of Sladek disclose forwarding the presence registration message to a presence

database. Column 14, line 37 through column 15, line 7 of Sladek state as follows:

> Referring now to FIG. 9, at step **52**, when CCP **34** receives the TCAP message, its core service logic **40** responsively parses the message and stores the parameters of the message in memory. At step **54**, core logic **40** then queries subscriber profile database **44** to obtain the subscriber profile for MS **46**, by reference to its MSID for example. Based on this profile, at step **56**, core logic **40** calls SMS logic **42**. At step **58**, SMS logic **42** then references the subscriber profile and stored TCAP parameters, and SMS logic **42** determines that, since the dialed digits represent an **314** code number, CCP **34** should generate the specified message to be sent to MS-based SME **48**.

> At step **60**, SMS logic **42** generates the specified text message. In doing so, SMS logic **42** retrieves the partially canned message from Mr. Smith's profile and notes that the message is supposed to include the name of the called party and the date and time of the call. Given only the number of the called party, SMS logic **42** concludes that it must convert the dialed digits into the name of the called party. Thus, SMS logic **42** queries name/number database **50**, to identify the subscriber name corresponding to the dialed subscriber number, and the database returns a string value, "Pete Harrison". In addition, SMS logic **42** identifies the current time as 14:34:03 and the current date as Jul. 29, 2004. SMS logic

42 then inserts these parameters into the partially defined message and establishes a complete informational text message, which reads, "George Smith called Pete Harrison at 14:34:03 on Jul. 29, 2004.

At step **62**, SMS logic **42** (or another module of CPE **34**) then sends an SMD-REQ message to the HLR of MS **48** and obtains in response an SMS_Address identifying the point code of the MSC **26** that is currently serving MS **48**. At step **64**, SMS logic **42** then generates an SMDPP message carrying the derived informational text message as bearer data and sends the message to MSC **26**. Finally, at step **66**, upon receipt of the SMDPP, MSC **26** then delivers the SMS message to MS **48**, where the text message is displayed for viewing by Pete Harrison.

The above-quoted passage from Sladek discusses the sending of a TCAP message to subscriber profiles database **44**, determining the type of SMS message to send to a caller based on digits dialed by the caller, and sending the SMS message to the caller. The entities involved in this transaction include SMS logic **42**, profiles database **44**, an HLR, and an MSC. None of these entities is a presence server. SMS logic **42** delivers SMS messages. Profiles database **44** stores information regarding the type of services to which the caller subscribers. The HLR tracks the subscriber's location. The MSC delivers the SMS message to the subscriber. None of these entities is a presence database that stores presence information and that allows subscribers to subscribe to other subscribers. Accordingly, for these reasons, it is respectfully submitted that the rejection of independent claim 22 as unpatentable over Sladek in view of Pirkola should be reversed.

<u>vi.</u>   <u>Argument for dependent claims 23, 25, 28, 33, and 62</u>

Claims 23, 25, 28, 33, and 62 depend from and further limit claim 22. Accordingly, for the same reasons stated above with regard to independent claim 22, it

is respectfully submitted that the rejection of these claims as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

vii.   <u>Argument for dependent claim 69</u>

Claim 69 depends from and further limits claim 22. Accordingly, for the same reasons stated above with regard to independent claim 22, it is respectfully submitted that the rejection of claim 69 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed. Moreover, claim 69 recites that the communication module includes SS7 signal transfer functionality for transferring SS7 signaling messages between SS7 signaling links. Neither <u>Pirkola</u> nor <u>Sladek</u> mentions any device that has SS7 signal transfer functionality. Both <u>Sladek</u> and <u>Pirkola</u> mention various nodes that originate and terminate SS7 signaling messages, but none of the nodes transfer, i.e., route, SS7 signaling messages between SS7 signaling links as preformed by a signal transfer point. Accordingly, for this additional reason, the rejection of claim 69 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

viii.   <u>Argument for independent claim 29</u>

The rejection of independent claim 29 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed because <u>Sladek</u> and <u>Pirkola</u> fail to teach or suggest a presence registration and routing node that includes a communication module and a presence server message generator that performs the functions recited in independent claim 29. For example, according to independent claim 29, the communication module receives a SS7 message from a SS7 network. The presence server message

generator generates, based on the SS7 message, a presence-server-compatible message for updating presence information regarding a target end user in a presence server database. Claim 29 further recites that the presence information includes a presences status for the target end user in that the presence server message generator forwards the presence server compatible message to the presence server database.

Because claim 29 recites the generation of a presence-server-compatible message for updating presence information regarding a target end user in a presence server database based on a SS7 message, the reasoning stated above with regard to the rejection of claim 1 as unpatentable over Sladek in view of Pirkola applies equally to claim 29. That is, neither Sladek nor Pirkola teaches or suggests generating a presence-server-compatible message. Both documents relate to generating SMS messages and obtaining subscriber location information for delivering the SMS messages to a subscriber. None of the mobility management messages discussed in either document are presence-server-compatible messages. Rather, such messages are IS-41 mobility management messages exchanged between HLRs and VLRs. In addition, the Official Action dated June 2, 2005, incorrectly indicates that the actions performed by SMS logic **32** and subscriber profiles database **44** of Sladek include delivering a presence-server-compatible message to a presence server database. SMS logic **42** of Sladek delivers SMS messages to end users. Subscriber profiles database **44** in Sladek stores services to which a subscriber can subscribe and is not a presence server database. Nowhere does Sladek indicate that subscriber profiles database **44** allows a subscriber to subscribe to other subscribers for receiving presence information for the other subscribers. Accordingly, for these reasons, it is respectfully submitted

that the rejection of independent claim 29 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

ix.   Argument for dependent claims 30-32

Claims 30-32 depend from and further limit claim 29. Therefore, for the same reasons stated above with regard to the rejection of independent claim 29 it is respectfully submitted that the rejection of these claims as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

x.   Argument for dependent claim 71

Claim 71 depends from and further limits claim 29. Therefore, for the same reasons stated above with regard to independent claim 29, the rejection of claim 71 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed. Moreover, claim 71 recites that the steps recited in claim 29 are performed at an SS7 signal transfer point capable of transferring SS7 signaling messages between SS7 signaling links. Neither <u>Sladek</u> nor <u>Pirkola</u> mentions a SS7 signal transfer point. Both documents discuss nodes that originate and terminate SS7 messages. However, neither mentions a signal transfer point that routes or transfers SS7 signaling messages between SS7 signaling links, not to mention a signal transfer point that generates a presence registration message based on a received SS7 signaling message as claimed in claim 71. Accordingly, for this additional reason, the rejection of claim 71 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

xi.   <u>Argument for independent claim 42</u>

The rejection of independent claim 42 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed because <u>Sladek</u> and <u>Pirkola</u> fail to teach a computer program product comprising computer executable instructions embodied in the computer readable media for performing the steps recited in claim 42 of receiving a SS7 message and generating an IP message for updating presence information regarding the target end user managed by a presence server, where the presence information includes information usable by a presence server for automatically indicating to end users who are subscribed to the target end user in a presence database a presence status for the target end user. Claim 42 further recites transmitting the IP message to a presence server over an IP network. As stated above with regard to the rejection of independent claim 1, neither <u>Sladek</u> nor <u>Pirkola</u> disclose generating a message for updating presence information regarding a target end user or forwarding such a message to a presence database. Both documents are directed to delivering SMS messages to subscribers and tracking the location of the subscribers using standard mobility management protocols. Accordingly, for this reason alone, the rejection of claim 42 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be withdrawn.

Moreover, on page 8 of the Official Action dated June 2, 2005, the Examiner indicates that column 7, lines 10-12 of <u>Sladek</u> disclose the claim element of, "transmitting the IP message to a presence server over an IP network." This is simply incorrect. Column 7, lines 10-12 of <u>Sladek</u> state as follows:

> (Alternatively, as another example, if the transport network is IP (internet protocol)-based, the SMS_Address parameter may contain an IP address.)

The above-quoted passage from <u>Sladek</u> indicates that the SMS_address parameter may include an IP address. According to <u>Sladek</u>, the SMS_address parameter is used to route short messages to the serving system for delivery to a destination. The SMS_address parameter is communicated to a mobile station's HLR in a registration notification (REGNOT) message. As stated above, an HLR is not a presence server because it does not allow subscribers to subscribe to other subscribers, it does not use the presence protocol, it communicates with the network rather than with subscribers and it does not receive messages that include presence information derived from SS7 messages. Accordingly, because the Official Action misinterprets <u>Sladek</u>, for this additional reason, it is respectfully submitted that the rejection of claim 42 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> should be reversed.

Yet another reason that the rejection of claim 42 should be reversed is that the Official Action dated June 2, 2005 incorrectly indicates that column 2, lines 62-65 of <u>Pirkola</u> disclose updating presence information regarding the target end user managed by a presence server. This is incorrect. Column 2, lines 62-65 of <u>Pirkola</u> state as follows:

> When a visiting (or roaming) cellular subscriber is detected in a serving system, the location update processes notify the subscriber's HLR of the subscriber's presence in the serving system.

The above-quoted passage from <u>Pirkola</u> discusses informing the subscriber's HLR of the subscriber's new location in a serving system. For the reasons stated above, it is respectfully submitted that an HLR is not a presence server. Accordingly, for this

additional reason, it is respectfully submitted that the rejection of claim 42 as unpatentable over Sladek in view of Pirkola should be reversed.

xii.   Argument for dependent claims 45-47

Claims 45-47 depend from and further limit claim 42. Accordingly, for the same reasons stated above with regard to claim 42, the rejection of these claims as unpatentable over Sladek in view of Pirkola should be reversed.

xiii.   Argument for dependent claim 75

Claim 75 depends from and further limits claim 42. Therefore, for the same reasons stated above with regard to claim 42, the rejection of claim 75 as unpatentable over Sladek in view of Pirkola should be reversed. Moreover, claim 75 recites that the steps of claim 42 are performed on a SS7 signal transfer point capable of transferring SS7 signaling message between SS7 signaling links. As stated above, neither Sladek nor Pirkola mentions an SS7 signal transfer point. Both Sladek and Pirkola discuss nodes that originate and terminate SS7 messages. However, neither document discloses a SS7 signal transfer point that transfers SS7 signaling messages between SS7 signaling links and that formulates an IP message containing presence information as claimed in claim 75. Accordingly, for this additional reason, the rejection of claim 75 as unpatentable over Sladek in view of Pirkola should be reversed.

B.   Rejection of claims 2, 3, 27, 43, and 44 under 35 U.S.C. § 103(a) as

unpatentable over Sladek in view of Pirkola and further in view of Christie

i.   Argument for dependent claims 2 and 3

Claims 2 and 3 depend from and further limit claim 1. As stated above with

regard to the rejection of independent claim 1, claim 1 fails to teach or suggest a

method where a presence registration message is automatically generated in response

to receipt of an SS7 message. Christie likewise lacks such teaching or suggestion.

Christie is directed to setting up an integrated voice and data session in response to a

single telephone call. (See Abstract of Christie.) There is no mention of generating a

presence registration message. The only messages discussed in Christie are the

messages used to set up the multimedia session.

Moreover, dependent claims 2 and 3 respectfully recite the telephony-related

action from which the presence registration message is triggered is the initiation of a

telephone call and the dialing of predetermined DTMF digits. Although Christie

mentions initiating calls and dialing digits, Christie fails to even remotely suggest

generating a presence registration message in response to either of these actions.

Accordingly, for this additional reason, the rejection of claims 2 and 3 as unpatentable

over Sladek in view of Pirkola and further in view of Christie should be reversed.

ii.   Argument for dependent claim 27

Claim 27 depends from and further limits claim 22. As stated above with regard

to the rejection of claim 22 as unpatentable over Sladek and Pirkola, Sladek and Pirkola

fail to teach or suggest a presence registration and routing node with a communication

module and a presence server message generator that generate a presence registration message in response to receipt of an SS7 message. <u>Christie</u> likewise lacks such teaching or suggestion. <u>Christie</u> is directed to setting up integrated voice and data sessions between end users and fails to mention the generation of any presence registration messages. Accordingly, for this reason alone, the rejection of claim 27 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> and further in view of <u>Christie</u> should be reversed.

Moreover, claim 27 recites that the SS7 message upon which the presence message is based is an ISDN user part (ISUP) message. While <u>Christie</u> mentions various ISUP messages, the purpose of these messages is to set up and tear down media communications between end users. In contrast, claim 27 recites the ISUP message as a trigger for a presence registration message. Since <u>Christie</u> fails to teach or even remotely suggest the use of an ISUP message as a trigger for a presence registration message, it is respectfully submitted that the rejection of claim 27 should be reversed for this additional reason.

<u>iii.</u>   <u>Argument for dependent claims 43 and 44</u>

Claims 43 and 44 depend from and further limit claim 42. As stated above with regard to the rejection of claim 42, <u>Sladek</u> and <u>Pirkola</u> fail to teach or suggest a computer program product that performs the steps of generating an IP message for updating presence information regarding a target end user in response to receiving an SS7 message in response to a telephony-related action by the target end user. <u>Christie</u> likewise lacks such teaching or suggestion. <u>Christie</u> is directed to setting up multimedia

communications between users. There is no mention of generating any presence registration messages. Accordingly, for this reason alone, the rejection of claims 43 and 44 as unpatentable over Sladek in view of Pirkola and further in view of Christie should be reversed.

Moreover, claims 43 and 44 respectively recite that the trigger used to generate the presence registration message is dialing of a number and generation of an IAM message (claim 43) and the dialing of predetermined DTMF digits to instruct an end office to generate an SS7 message (claim 44). While Christie discloses various SS7 messaging and dialing of digits, the purpose of the messaging and the dialing digits is to establish the media communications session. There is absolutely no teaching or suggestion in Christie of using an IAM message or dialed digits to generate a presence registration message. Thus, for this additional reason, it is respectfully submitted that the rejection of claims 43 and 44 as unpatentable over Sladek in view of Pirkola and further in view of Christie should be reversed.

C.   Rejection of claims 7-9, 24, 26, 34, 48-50, 66, 70, 72, and 76 under 35 U.S.C. § 103(a) as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson

i.   Argument for dependent claim 7

Claims 7 depends from and further limits claim 1. As stated above with regard to the rejection of independent claim 1, Sladek and Pirkola fail to teach or suggest automatically generating a presence registration message including presence information in response to receipt of an SS7 message as claimed in claim 1.

Gudjonsson likewise lacks such teaching or suggestion. Gudjonsson, like Sladek and Pirkola, has nothing to do with deriving or updating presence information stored by a presence server. Rather, Gudjonsson is directed to a communications network where a cluster of servers 1 allows users to set up multimedia communications with other users. There is no mention of generating a presence registration message in response to an SS7 message. Accordingly, for this reason alone, the rejection of claim 7 as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson should be reversed.

Moreover, claim 7 recites that the presence registration message comprises a SIP message. The Official Action correctly notes that Gudjonsson mentions the SIP protocol. However, Gudjonsson fails to teach or suggest using the SIP protocol for a presence registration message. For example, with regard to the SIP protocol, Gudjonsson states:

> When a user 7 wishes to establish a communication with another user, he/she will invoke some function within his/her client 11, requesting the client to send an invitation of a given type to some selected user. The user client will then form the correct SIP message and send it to the special service within the cluster, called the routing service. (See column 9, lines 13-19 of Gudjonsson.)

From this passage, Gudjonsson indicates that SIP is used to send an invitation for setting up a session to an end user. This is conventional use of the SIP protocol and has nothing to do with presence registration. Accordingly, for this additional reason, the rejection of claim 7 as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson should be reversed.

ii.   Argument for dependent claim 8

Claim 8 depends from and further limits claim 1. As stated above with regard to the rejection of independent claim 1, Sladek and Pirkola fail to teach or suggest automatically generating a presence registration message including presence information in response to receipt of an SS7 message as claimed in claim 1. Gudjonsson likewise lacks such teaching or suggestion. Gudjonsson, like Sladek and Pirkola, has nothing to do with deriving or updating presence information stored by a presence server. Rather, Gudjonsson is directed to a communications network where a cluster of servers 1 allows users to set up multimedia communications with other users. There is no mention of generating a presence registration message in response to an SS7 message. Accordingly, for this reason alone, the rejection of claim 8 as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson should be reversed.

Moreover, claim 8 recites that the presence registration message comprises an IMPP message. The Official Action correctly notes that Gudjonsson mentions the IMPP protocol. However, Gudjonsson fails to teach or suggest using the IMPP protocol for a presence registration message. With regard to the IMPP protocol, Gudjonsson states:

> Various companies have created networks running on top of the Internet that allow users to send each other short text messages and monitor the status of other users, where the status is usually defined as whether a user is currently connected to a network or not. This kind of functionality is current being considered as the IETF standard called IMPP (instant messaging and presence protocol). (See column 2, lines 16-22 of Gudjonsson.)

The above quoted passage from <u>Gudjonsson</u> merely states that the IMPP protocol is used to communicate status information regarding whether or not users are connected to a network. This is the normal use of the IMPP protocol. There is absolutely no teaching or suggestion of generating a presence registration message which is an IMPP message as claimed in claim 8. Accordingly, for this additional reason, it is respectfully submitted that the rejection of claim 8 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> and further in view of <u>Gudjonsson</u> should be reversed.

<u>iii.</u>   <u>Argument for dependent claims 9 and 66</u>

Claims 9 and 66 depend from and further limit claim 1. As stated above with regard to the rejection of claim 1, <u>Pirkola</u> and <u>Sladek</u> fail to teach or even remotely suggest generating a presence registration message in response to an SS7 message as claimed in claim 1. <u>Gudjonsson</u> likewise lacks such teach or suggestion. As stated above, <u>Gudjonsson</u> mentions using both SIP and IMPP protocols. However, the SIP protocol is disclosed as being used to set up multimedia sessions. The IMPP protocol is disclosed as being used to distribute text messages between users. There is no description of generating the presence registration message in response to an SS7 message as claimed in independent claim 1. Thus, for these reasons, the rejection of claims 9 and 66 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> and further in view of <u>Gudjonsson</u> should be reversed.

iv.   Argument for dependent claim 24

Claim 24 depends from and further limits claim 22. As stated above with regard to the rejection of claim 22, Sladek and Pirkola fail to teach or suggest the presence registration and routing node that includes a communication module and a presence server message generator for generating a presence registration message in response to receipt of an SS7 message. Gudjonsson likewise lacks such teaching or suggestion. Gudjonsson is directed to setting up multi-media sessions and does not discuss presence registration. Accordingly, for this reason alone, the rejection of claim 24 as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson should be reversed.

Moreover, claim 24 recites that the presence registration message is a SIP message. As stated above, Gudjonsson mentions only the conventional use of SIP messages to establish sessions. There is no disclosure of using a SIP message to perform presence registration as claimed in claim 24. Accordingly, for this additional reason, the rejection of claim 24 as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson should be reversed.

v.   Argument for dependent claims 26, 34, and 70

Claims 26, 34, and 70 depend from and further limit claim 22. As stated above with regard to the rejection of claim 22, Sladek and Pirkola fail to teach or suggest a presence registration and routing node that includes a communication module and a presence server message generator for generating the presence registration message in response to receipt of an SS7 message. Gudjonsson likewise lacks such teaching or

suggestion. <u>Gudjonsson</u> mentions the IMPP protocol. However, <u>Gudjonsson</u> fails to even remotely suggest generating an IMPP presence registration message in response a SS7 message as claimed. Accordingly, it is respectfully submitted that the rejection of claims 26, 34, and 70 as unpatentable over <u>Gudjonsson</u> in view of <u>Sladek</u> and further in view of <u>Pirkola</u> should be reversed.

<u>vi</u>.   <u>Argument for dependent claim 48</u>

Claim 48 depends from claim 42. As stated above with regard to the rejection of claim 42, <u>Sladek</u> and <u>Pirkola</u> fail to teach or suggest a computer program product having computer executable instructions that perform the steps of generating and transmitting an IP message for updating presence information regarding the target end user in response to receipt of an SS7 message for a telephony-related action performed by the target end user. <u>Gudjonsson</u> likewise lacks such teaching or suggestion. As stated above, <u>Gudjonsson</u> is directed to setting up multimedia sessions between end users. Presence registration is not mentioned. Accordingly, for this reason alone, the rejection of claim 48 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> and further in view of <u>Gudjonsson</u> should be reversed.

Moreover, claim 48 recites that presence registration message is a SIP message. <u>Gudjonsson</u> only discloses the use of SIP messages to set up multimedia communication sessions. There is no mention in <u>Gudjonsson</u> of using a SIP message to perform a presence registration as claimed in claim 48. Accordingly, for this additional reason, the rejection of claim 48 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> and further in view of <u>Gudjonsson</u> should be reversed.

vii.   Argument for dependent claims 49, 50, and 76

Claims 49, 50, and 76 depend from and further limit 42. As stated above with regard to the rejection of claim 42, Sladek and Pirkola fail to teach or suggest a computer program product having computer executable instructions that perform the steps of generating an IP message for updating presence information regarding a target end user in response to an SS7 signaling message generated for a telephony-related action performed by the target end user. Gudjonsson likewise lacks such teaching or suggestion. Gudjonsson is directed to setting up multimedia sessions between end users and fails to mention presence registration, not to mention presence registration in response to an SS7 message. Accordingly, it is respectfully submitted that the rejection of claims 49, 50, and 76 as unpatentable over Sladek in view of Pirkola and further in view of Gudjonsson should be reversed.

viii.   Argument for dependent claim 72

Claim 72 depends from and further limits claim 29. As stated above regard to the rejection of claim 29, Sladek and Pirkola fail to teach or suggest a presence registration and routing node including a communication module and a presence server message generator that generate a presence-server-compatible message in response to receipt of an SS7 message. Gudjonsson likewise lacks such teaching or suggestion. Gudjonsson is directed to setting up multimedia communication sessions between end users and does not mention presence registration. Gudjonsson mentions the IMPP protocol, but fails to describe how registration is performed for that protocol.

Accordingly, it is respectfully submitted that the rejection of claim 72 as unpatentable over <u>Sladek</u> in view of <u>Pirkola</u> and further in view of <u>Gudjonsson</u> should be reversed.
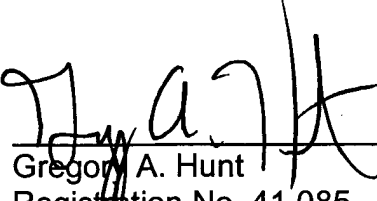
For the foregoing reasons, it is respectfully submitted that the Examiner's rejections of claims 1-10, 22-34, 42-50, 61-66, 69-72, 75 and 76 should be reversed.

Respectfully submitted,

JENKINS, WILSON, TAYLOR & HUNT, P.A.

Date: <u>June 2, 2006</u>   By: _____

Gregory A. Hunt
Registration No. 41,085
Customer No: 25297

1322/40/2   GAH/sed

VIII. Claims Appendix

1.   A method for updating presence information regarding a target end user in a presence database based on information derived from a telephony-related action, the method comprising:

(a)   receiving a signaling system seven (SS7) message in response to a telephony-related action performed by a target end user to which other end users are subscribed in a presence database;

(b)   determining, based on the SS7 message, whether presence registration processing is required for the target end user;

(c)   in response to determining that presence registration processing is required for the target end user, automatically generating a presence registration message including presence information usable by a presence server for automatically indicating to the end users who are subscribed to the target end user in a presence database a presence status for the target end user; and

(d)   transmitting the presence registration message to the presence server over an IP network.

2.   The method of claim 1 wherein the telephony-related action includes dialing a called party telephone number utilizing a PSTN telephone to initiate a call from the target end user to the called party telephone number and the signaling system seven message is an IAM message.

3.   The method of claim 1 wherein the telephony-related action includes entering DTMF digits using a PSTN telephone handset after a call has been established,

the DTMF digits forming a code for instructing an end office to formulate the SS7 message.

4.   The method of claim 3 wherein the SS7 message is a transaction capabilities application part (TCAP) message containing presence information for the target end user.

5.   A method for updating presence information regarding a target end user in a presence database based on information derived from a signaling message relating to a telephony-related action performed by the target end user, the method comprising:

(a)   receiving a signaling system 7 (SS7) message in response to a telephony-related action performed by a target end user, wherein the telephony-related action is the activation or change in location of a mobile telephone handset and the SS7 message is a message for updating the status of the target end user in at least one of a home location register (HLR) and a visitor location register (VLR); and

(b)   intercepting the SS7 message, extracting information from the SS7 message, and using the information extracted from the SS7 message to update presence information for the target end user in a presence database, the presence information including information usable by a presence server for automatically indicating to end users who are subscribed to the target end user a presence status for the target end user.

6. The method of claim 1 wherein automatically generating a presence registration message includes automatically generating a presence protocol message.

7. The method of claim 1 wherein automatically generating a presence registration message includes automatically generating a session initiation protocol (SIP) message.

8. The method of claim 1 wherein automatically generating a presence registration message includes automatically generating an instant messaging and presence protocol (IMPP) message.

9. The method of claim 1 comprising, in response to receiving the SS7 message, sending a second message to an accounting and billing system.

10. The method of claim 9 wherein the second message is a copy of the SS7 message.

11. A method for processing a query to a presence server database, the method comprising:

    (a) receiving, at presence registration and routing node, an IP message for determining presence information for a first end user to which other end users are subscribed in a presence database, the presence information being usable by a presence server for automatically indicating to the end users subscribed to the first end user a communication medium for contacting the first end user using a text messaging protocol and the fact that the first end user is currently available to receive text messaging protocol messages via the communications medium;

(b)   formulating a query to a presence database for obtaining the presence information;

(c)   obtaining the presence information from the presence database; and

(d)   forwarding the presence information to a second end user, wherein the second end user uses the presence information to determine the appropriate communication medium for contacting the first end user using the text messaging protocol and the availability of the first end user to receive text messaging protocol communications via the communications medium.

12.   The method of claim 11 wherein receiving an IP message includes receiving a presence protocol message.

13.   The method of claim 12 wherein receiving a presence protocol message includes receiving a fetch message requesting presence information regarding the entity.

14.   The method of claim 11 wherein forwarding the presence information to a second end user includes forwarding a presence protocol message to the second end user.

15.   The method of claim 14 wherein forwarding a presence protocol message includes forwarding a notify message to the second end user.

16.   The method of claim 11 wherein receiving an IP message includes receiving a session initiation protocol (SIP) message.

17.   The method of claim 11 wherein receiving an IP message includes receiving an instant messaging and presence protocol (IMPP) message.

18. The method of claim 11 wherein obtaining the presence information from the presence database includes obtaining the presence information from a presence database located internal to the presence registration and routing node.

19. The method of claim 11 wherein obtaining the presence information from the presence database includes obtaining the presence information from a presence database located external to the presence registration and routing node.

20. The method of claim 11 comprising, in response to receiving the IP message, sending a second message to an accounting and billing system.

21. The method of claim 20 wherein the second message is a copy of the IP message.

22. A presence registration and routing node for updating presence information regarding an end user in a presence server database, the presence registration and routing node comprising:

    (a) a communication module for receiving an SS7 message relating to a target end user to which other end users are subscribed in a presence database and for determining whether presence registration processing is required for the SS7 message; and

    (b) a presence server message generator for, if the communication module determines that presence registration processing is required, for receiving a copy of the SS7 message and for automatically generating a presence registration message including presence information usable by a presence server for automatically indicating to the end users subscribed to the target end user a presence status for the target end user, wherein the

presence server message generator is adapted to forward the presence registration message to the presence database.

23. The presence registration and routing node of claim 22 comprising an advanced database communication module for encapsulating the presence registration message in an IP packet and transmitting the IP packet to a presence server over an IP network.

24. The presence registration and routing node of claim 22 wherein the presence registration message is a session initiation protocol (SIP) message.

25. The presence registration and routing node of claim 22 wherein the presence registration message is a presence protocol message.

26. The presence registration and routing node of claim 22 wherein the presence registration message is an instant messaging and presence protocol (IMPP) message.

27. The presence registration and routing node of claim 22 wherein the SS7 message is an ISDN user part (ISUP) message.

28. The presence registration and routing node of claim 22 wherein the SS7 message is a transaction capabilities application part (TCAP) message.

29. A presence registration and routing node for updating presence information regarding an end user in a presence server database, the presence registration and routing node comprising:

(a) a communication module for receiving an SS7 message from an SS7 network; and

(b)   a presence server message generator for generating, based on the SS7 message, a presence-server-compatible message for updating presence information regarding a target end user in a presence server database, the presence information including a presence status for the target end user, wherein the presence server message generator is adapted to forward the presence-server-compatible message to the presence server database.

30.   The presence registration and routing node of claim 22 comprising a presence server database operatively associated with the presence server message generator for receiving the presence-server-compatible message and for updating the presence information in response to the presence-server-compatible message.

31.   The presence registration and routing node of claim 30 wherein the presence server database is located internal to the presence registration and routing node.

32.   The presence registration and routing node of claim 30 wherein the presence server database is located external to the presence registration and routing node.

33.   The presence registration and routing node of claim 22 wherein the presence server message generator is adapted to receive presence queries, forward the presence queries to a presence server database, and receive responses from the presence server database.

34.   The presence registration and routing node of claim 22 comprising:

(a)   means for generating an accounting message based on at least one of the SS7 message received by the communication module and the presence-server-compatible message; and

(b)   an accounting and billing system for storing accounting information based on the accounting message.

35.   A presence registration and routing node for providing presence information regarding an entity, the presence registration and routing node comprising:

(a)   an advanced database communications module for receiving an IP-encapsulated presence-server-compatible message for determining presence information for a first end user, the presence information indicating a communication medium for contacting the first end user using a text messaging protocol and the fact that the first end user is currently available to receive text messaging protocol messages via the communications medium; and

(b)   a presence server message processor operably associated with the advanced database communications module for forwarding the presence-server-compatible message to a presence server for determining the presence information, wherein the presence server stores the presence information for the first end user, and subscription information indicating a second end user subscribed to automatically receive presence information regarding the first end user and sends a response to the presence-server-compatible message to the second end user, thereby informing the second end user of the appropriate communications medium for contacting the first end user using text messaging protocol communications and whether the first end user is currently available to

receive text messaging protocol messages via the communications medium.

36.   The presence registration and routing node of claim 35 wherein the presence server message processor is adapted to receive the presence information from the presence server and forward the presence information to the advanced database communications module.

37.   The presence registration and routing node of claim 36 wherein the advanced database communications module is adapted to forward the presence information to an endpoint over an IP network.

38.   The presence registration and routing node of claim 35 comprising a presence server operatively associated with the presence server message processor for providing the presence information to the presence server message processor.

39.   The presence registration and routing node of claim 38 wherein the presence server is located internal to the presence registration and routing node.

40.   The presence registration and routing node of claim 38 wherein the presence server is located external to the presence registration and routing node.

41.   The presence registration and routing node of claim 35 comprising:

   (a)   means for generating an accounting message based on the presence-server-compatible message; and

   (b)   an accounting and billing system for storing accounting information based on the accounting message.

42.   A computer program product comprising computer-executable instructions embodied in a computer-readable medium for performing steps comprising:

(a)   receiving a signaling system seven (SS7) message in response to a telephony-related action performed by a target end user;

(b)   in response to receiving the SS7 message, formulating an internet protocol (IP) message for updating presence information regarding the target end user managed by a presence server, the presence information including information usable by the presence server for automatically indicating to end users subscribed to the target end user in a presence server database a presence status for the target end user; and

(c)   transmitting the IP message to the presence server over an IP network.

43.   The computer program product of claim 42 wherein the telephony-related action includes dialing a called party telephone number utilizing a PSTN telephone to initiate a call from the target end user to the called party telephone number and the signaling system seven message is an IAM message.

44.   The computer program product of claim 42 wherein the telephony-related action includes entering DTMF digits using a PSTN telephone handset after a call has been established, the DTMF digits forming a code for instructing an end office to formulate the SS7 message.

45.   The computer program product of claim 42 wherein the SS7 message is a transaction capabilities application part (TCAP) message containing presence information for the target end user.

46.   The computer program product of claim 42 wherein the telephony-related action is the activation of a mobile telephone handset and the SS7 message is a

message for updating the status of the target end user in at least one of a home location register (HLR) and a visitor location register (VLR).

47. The computer program product of claim 42 wherein formulating an IP message includes formulating a presence protocol message.

48. The computer program product of claim 42 wherein formulating an IP message includes formulating a session initiation protocol (SIP) message.

49. The computer program product of claim 42 wherein formulating an IP message includes formulating an instant messaging and presence protocol (IMPP) message.

50. The computer program product of claim 42 comprising generating an accounting message in response to at least one of the SS7 message and the IP message and forwarding the accounting message to an accounting and billing subsystem.

51. A computer program product comprising computer executable instructions embodied in a computer-readable medium for performing steps comprising:

(a) receiving, at a presence registration and routing node, an IP message for determining presence information for a target entity, the presence information including information for contacting the target entity via a text messaging protocol;

(b) formulating a query to a presence database for obtaining the presence information;

(c) obtaining the presence information from the presence database based on the query; and

(d)   forwarding the presence information to an end user subscribed to the target entity in the presence database.

52.   The computer program product of claim 51 wherein receiving an IP message includes receiving a presence protocol message.

53.   The computer program product of claim 52 wherein receiving a presence protocol message includes receiving a fetch message requesting presence information regarding the target entity.

54.   The computer program product of claim 51 wherein forwarding the presence information to an end user includes forwarding a presence protocol message to the end user.

55.   The computer program product of claim 54 wherein forwarding a presence protocol message includes forwarding a notify message to the end user.

56.   The computer program product of claim 51 wherein receiving an IP message includes receiving a session initiation protocol (SIP) message.

57.   The computer program product of claim 51 wherein receiving an IP message includes receiving an instant messaging and presence protocol (IMPP) message.

58.   The computer program product of claim 51 wherein obtaining the presence information from the presence database includes obtaining the presence information from a presence database located internal to the presence registration and routing node.

59.   The computer program product of claim 51 wherein obtaining the presence information from the presence database includes obtaining the presence

information from a presence database located external to the presence registration and routing node.

60. The computer program product of claim 51 comprising generating an accounting message in response to at least one of the IP message and the query and forwarding the accounting message to an accounting and billing subsystem.

61. The method of claim 1 comprising routing the SS7 message to its intended destination.

62. The presence registration and routing node of claim 22 wherein the communication module is adapted to route the SS7 message to its intended destination.

63. The method of claim 1 wherein the telephony related action comprises activation of the end user's mobile telephone and wherein the presence information indicates that the target end user is currently reachable to receive messaging protocol communications via the target end user's mobile telephone.

64. The method of claim 1 wherein the telephony related action comprises entering a predetermined code via the target end user's wireline telephone and wherein the presence information indicates that the target end user is currently reachable via the end user's wireline telephone.

65. The method of claim 1 wherein steps (a)-(e) are performed at an SS7 signal transfer point capable of transferring SS7 signaling messages between SS7 signaling links.

66. The method of claim 1 wherein the presence information includes information usable by the users subscribed to the target end user for contacting the target end user via an instant messaging protocol.

67. The method of claim 11 wherein steps (a)-(d) are performed at an SS7 signal transfer point capable of transferring SS7 signaling messages between SS7 signaling links.

68. The method of claim 11 wherein the text messaging protocol comprises an instant message protocol.

69. The presence registration and routing node of claim 22 wherein the communication module includes SS7 signal transfer functionality for transferring SS7 signaling messages between SS7 signaling links.

70. The presence registration and routing node of claim 22 wherein the messaging protocol comprises an instant message protocol.

71. The method of claim 29 wherein steps (a)-(d) are performed at an SS7 signal transfer point capable of transferring SS7 signaling messages between SS7 signaling links.

72. The presence registration and routing node of claim 29 wherein the presence information includes information usable by the users subscribed to the target end user for contacting the target end user via an instant message protocol.

73. The presence registration and routing node of claim 35 wherein the advanced database communications module is adapted to transfer IP-encapsulated SS7 signaling messages between IP signaling links.

74. The presence registration and routing node of claim 35 wherein the text messaging protocol comprises presence information includes information usable by the users subscribed to the target end user for contacting the target end user via an instant message messaging protocol.

75. The computer program product of claim 42 wherein steps (a)-(c) are performed on an SS7 signal transfer point capable of transferring SS7 messages between SS7 signaling links.

76. The computer program products of claim 42 wherein the text messaging protocol comprises presence information includes information usable by the users subscribed to the target end user for contacting the target end user via an instant messaging protocol.

77. The computer program product of claim 51 wherein steps (a)-(c) are performed on an SS7 signal transfer point capable of transferring SS7 messages between SS7 signaling links.

78. The computer program products of claim 51 wherein the text messaging protocol comprises an instant messaging protocol.

IX. Evidence Appendix

None

X.   Related Proceedings Appendix

None